Myork Order June-03-13 7:21:2			*10	255	7*	*	* # ,		•	· · · · · · · · · · · · · · · · · · ·	Page 1
Revision ID:	3197-041 ar Assembly		Accept	*N	1900	040	100)*	Setup Star Stop	171.	S1*
Start Date: 6/ Required Date: 6/	/03/13 Start Qty: /10/13 Req'd Qty:	\ <i>'</i>			Cust Item II Customer:) :					
	Process Plan: Ma	5 Date: _ 3 ~ ⊘&			Da Da			F	Run Star Stop	" 7	R1*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	 }	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp.
Draw Nbr	Revision Nbr										
D3197	Rev B	i :									
*100 *100* Bandsaw Jeaspa Bandsaw	BAND SAW . Me Cut	mo blanks: 29.125" long	0.00	PO	13/06	106		6	Ø		
110	gog efter i en um útbleve umais seus ain ain	A STATE OF THE STA	0.00	·. ·					, =		
110 HAAS I	Me	RTICAL MACHINING #1	0.00				02	3	3-	06-0	D& (₹G)
HAAS CNC vertical ma		ace ends to lenght per dwg D31 Dwg D31973-Deburr	1972-Machine D3197-1 as	s per Folio FA	340 FK 1	3/06/	<i>ે</i> વ				
*120 *120*		rts off machine FAI/FAIB	0.00			س <u>ب</u> 	DAn 02	1 0	- (7	ر م) ن - را	-04 + 6y
Quality Control	Me	mo	0.00	FS	13/00	P/69	o-89	. –	.—		

DQA:			Date:						_					10	DART.
QA Closed:			Date:			WORK ORDER NON	-CC	ONFO	RMANCE / U	PDATE	١٨/،	ork Order up	ndate only		AEROSPACE
an closed.			Date.								VV.	ork Order up	date only		1
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
						Rework			Skid-tube	Crosstube			Water Jet	7 E	ngineering
Part N	lo.					Scrap			Machining	Small Fab	$\overline{}$	Pro	d. Eng. Coor.	_	Quality
						Use-as-is		Therr	noforming	Finishing		1	re/Packaging	1	Other
NCR N	۱o. <u> </u>		***			Suspected Unapproved			Large Fab	Composite			Supplier		
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Root		_	.		Desci	ription of work order update		nitial		tion		Sign &		-	
Cause	\dashv	Date	Step	Qty		or non-conformance	Ch	ief Eng	Desci	ription		Date	Verification		QC Inspector
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Handling/Pre	\dashv					·									
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	_	_	t Concer	ntric		BOM/Route		Grain	- 3		\vdash	Over/Under	-		t-up
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	w	ave/Tw	ist in Tub	ре		Fit/Function		Out of	Sequence						

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

102557

Page 2

June-03-13 7:21:29 AM Item ID: D3197-041 Accept *N900040100* Setup Start **Revision ID:** Item Name: Bar Assembly **Start Date:** Start Qty: 6.00 6/03/13 Cust Item ID: Required Date: 6/10/13 Req'd Qty: 6.00 **Customer:** Reference: Run Process Plan: Approvals: Tooling: Date: Date: QC: ____ Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. **Work Center ID** Description **Run Hours** Code Qty Qty Number Stamp 130 0.00 DAS 02 2T 13-06.08 CONVENTIONAL LATHE *130* Lathe Conv 0.00 Memo Conventional Lathe Chamfer as per Dwg D3197 on 13/ddio 140 QC8- Inspect parts - second check 0.00 *140* QC 0.00 Memo Quality Control 150

150 HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

6 & Bl 13.6-10

DQA:		Date:										T Q A C
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / UI		Vork Order uj	odate only	AEROSPACE
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Part N		• • • • • •			Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet d. Eng. Coor.	Engineering Quality
NCR N					Use-as-is Suspected Unapproved			noforming Large Fab	Finishing Composite	⊣	re/Packaging Supplier	Other
Root				Desci	ription of work order update	1	nitial	Act	ion	Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector
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Doc/Data												
Equip/Tooling												
Handling/Pre												
Material				-								
Operator												
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	Bending				Bend		Folio/F	rogram	· [Outside Dim	ensions	Pressure/Forced
	Centre N	ot Conce	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
	Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorre	ct	Temperature/Cure
	Crimp/Ki	nk/Ripple	e/Wave		Burrs		Inspect	ion Incomplete/Ur	nqualified	Part Lost/Mi	issing	Weld
	Cuffs				Contamination		Instruct	ions Incomplete/L	Inclear	Part Moved		Wrong Stock Pulled
[Crushing				Countersink		Misalig	ned/off center		Positioned V	Vrong	
	Heat Tre	at			Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other
	Inspectio	n Strip in	Tube		Drawing		Misread	1	_			•
ĺ	Marks/C	hatter			Drill Holes		Off-set					
ĺ	Turning S	Sequence	!		Finish		4	Calibration			·	
	Wave/Tv	vist in Tul	he		Fit/Function		1	Sonuence				

180

120 Small Fab

Small Fab

Small Fab

Memo

Assemble D3197-041 as per Dwg D3197

Insp.

Stamp

June-03-13 7:21:29 AM Item ID: D3197-041 Accept *N900040100* Setup Start **Revision ID:** Item Name: Bar Assembly **Start Date:** 6/03/13 Start Oty: 6.00 Cust Item ID: Required Date: 6/10/13 Req'd Qty: 6.00 **Customer:** Reference: Run **Approvals: Process Plan:** Date: Tooling: Date: Date: SPC (Y/N): Date: Operation Sequence ID/ Set Up/ **Tool ID** Tool # Plan Accept Reject Reject Work Center ID Description **Run Hours** Code Qty Qty Number 160 Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 0.00 *160* Powdercoat 0.00 **Powder Coating** OVEN TEMPERATURE: 170 QC3- Inspect Part Finish 0.00 *170* 64 6 H 13/06/11 QC 0.00 Memo Quality Control

0.00

0.00

DQA:			Date:											*	
						WORK ORDER NON-	-C(ONFO	RMANCE / U	PDATE					
QA Closed:			Date:								W	ork Order up	date only		
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
	-				_	Rework			Skid-tube	Crosstube			Water Jet		Engineering
Part N	ю.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.	П	Quality
	-					Use-as-is		Therr	noforming	Finishing		1	re/Packaging		Other
NCR N	10.				_	Suspected Unapproved			Large Fab	Composite			Supplier		
Root					Desci	ription of work order update		nitial	Act	tion		Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Desci	ription		Date	Verificatio	n	QC Inspector
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	\dashv	Centre No	nt Concor	stric	-	BOM/Route	 	1 '	Program		<u> </u>	Outside Dim			Pressure/Forced
	-	Cracks	or concen	itrit		Broken/Damage/Defect	<u> </u>	Grain			<u> </u>	Over/Under		-	Set-up
	\dashv	Crimp/Kin	k/Rinnle	/\ <i>M</i> >ve		Burrs	-	Hardwa	ire ion Incomplete/Ui	ممينماناتوط	\vdash	Part Incorred		-	Temperature/Cure
	-	Cuffs	ik/itippie/	, wave	-	Contamination	_	1	•	•	_	Part Lost/Mi	-	-	Weld
	\dashv	Crushing				Countersink	_	1	tions Incomplete/l gned/off center	Jiicieai		Part Moved Positioned W		Ш	Wrong Stock Pulled
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	-	Inspection		Tube		Drawing	-	Misrea			Щ	rower Loss/S	ouige	Ш	Other
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		Wave/Tw		e		Fit/Function		1	Sequence				 		
		Turning Se	equence	e		Finish	\vdash	Out of	Calibration						

Quality Control

Page 4

June-03-13 7:21:29 4M Item ID: D3197-041 Accept *N900040100* Setup Start **Revision ID:** Item Name: Bar Assembly **Start Date:** 6/03/13 Start Qty: 6.00 **Cust Item 1D:** Required Date: 6/10/13 **Req'd Qty:** 6.00 **Customer:** Reference: Run Approvals: **Process Plan:** Date: Tooling: Date: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 190 QC5- Inspect part completeness to step on W/O *190* Memo Quality Control 200 Identify as per dwg & Stock Location: 0.00 Packaging 0.00 Memo Packaging 210 QC21- Final Inspection - Work Order Release 0.00 *210* 0.00 Memo

13-7.7

DQA:			Date:										DART
OA Clasadi			Date:			WORK ORDER NON	-C(ONFO	RMANCE / UPDATE		auli Oddau	alaka anki 🎉	AEROSPACE
QA Closed:			Date.		1					VV	ork Order up	odate only	
Work Orde	er:					DISPOSITION			AGAIN	ST DE	PARTMENT	/PROCESS	14.
	-				_	Rework	1		Skid-tube Crosstu	be	1	Water Jet	Engineering
Part !	No.					Scrap	1		Machining Small F	<u> </u>	Pro	d. Eng. Coor.	Quality
	-					Use-as-is	1		noforming Finishi	-	1	re/Packaging	Other
NCR !	No					Suspected Unapproved]		Large Fab Compos	~ -		Supplier	
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Landi	ng G	ear	-			General		_					
		Bending				Bend		Folio/F	Program		Outside Dim	ensions	Pressure/Forced
	Ш	Centre No	ot Conce	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
:	Ш	Cracks				Broken/Damage/Defect		Hardwa	are	1	Part Incorre	ct	Temperature/Cure
	Ш	Crimp/Kir	ık/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Unqualified		Part Lost/Mi	ssing	Weld
	Ш	Cuffs				Contamination		Instruct	tions Incomplete/Unclear		Part Moved		Wrong Stock Pulled
*	$\boldsymbol{\vdash}$	Crushing		•		Countersink		Misalig	gned/off center		Positioned V	Vrong	
	Н	Heat Trea				Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other
	$\overline{}$	Inspection		Tube		Drawing		Misread	d .				enter
	\vdash	Marks/Ch				Drill Holes		Off-set					
	\vdash	Turning S	•			Finish		Out of 0	Calibration				
		Wave/Tw	ist in Tub	эe		Fit/Function	1	Out of	Sequence				

Picklist Print

June-03-13 7:21:32 AM

Work Order ID: 102557

Parent Item:

D3197-041

Parent Item Name: Bar Assembly

102557

D3197-041

Start Date: 6/03/13

Required Date: 6/10/13

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP Rev: A New Issue 05-11-08 JLM

IPP Rev:B As per Rev B 06-03-10 JLM

	Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
	MS27039-1-24	·· · ·	Purchased	No			100	Each	46.0000	2	12			
	MS27039	-1-24								**		8F	13 -0	06-11
				Sec.	Location		Loc	<u>Qty</u>	Loc Code		•			
					GA			46				_		
	ANIOCOMPIA					121912		46		_	12			
	AN960JD10	NAS1149D0363J	Purchased	No			180	Each	0.0000	6	36			
X	*AN960.ID	1()*			12439	2				**	36	H	13-0	6-11
	D2690-5		Manufactured	No			180	Each	5.0000	2	12			•
•	*D2690-5* Lanyard Assembly									**		FF	13-	07-03
					Location	103805	Loc		Loc Code		4			V
					51014	100722		5 4		_		-		
			•			91937		1		_		_		
•	D3242-1		Manufactured	No			180	Each	20.0000	2	12			
X	*D3242-1*									**		FF	13	-06-11
1	-				Location		Loc	<u>Oty</u>	Loc Code					
					GA			20		K _	_	_		
						100723		8		· .	<u> </u>	-		
						102026		12		BANGS - 18	4	_		

DQA:	Date:													*	DA DT
						WORK ORDER NON-	-CC	ONFO	RMANCE / U	PDATE				_	AEROSPACE
QA Closed:			Date:								W	ork Order up	date only	\perp	······
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
						Rework		4	Skid-tube	Crosstube			Water Jet		Engineering
Part N	lo.					Scrap		1	Machining	Small Fab	_	Pro	d. Eng. Coor.	┪	Quality
		ą				Use-as-is			noforming	Finishing		1	re/Packaging		Other
NCR N	10					Suspected Unapproved			Large Fab	Composite			Supplier		
Root					Descr	iption of work order update	1	nitial	Act	ion		Sign &		T	
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	ription		Date	Verification		QC inspector
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Doc/Data															
Equip/Tooling	_														
Handling/Pre	_	,					-								
Material	_	٠,													•
Operator															
Offset/Setup	_		~				,								•
Process	\square							•				!		1	
Supplier	-														
Training ~	\mathbf{H}							• •							
Transport	+														
Unapproved							<u> </u>	UT CAT	l regory			<u> </u>			
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Landi		ending				Bend		Eolio/E	rogram			Outside Dim	ensions [\neg	Pressure/Forced
	_		t Concer	ntric		BOM/Route	_	Grain	rogram			Over/Under	-	_	Set-up
		acks	Concer	11110		Broken/Damage/Defect	\vdash	Hardwa	ire		H	Part Incorred	<u> </u>	\neg	Temperature/Cure
	—		k/Ripple	/Wave		Burrs	-	1	ion Incomplete/Ur	ngualified		Part Lost/Mi	F-	\neg	Weld
		uffs	,			Contamination		1 '	tions Incomplete/l	,		Part Moved	 -		Wrong Stock Pulled
	_	rushing				Countersink	Г	4	ned/off center			Positioned V	L		21.2.10 212311 4 41124
	-	eat Trea	t			Cut Too Short		Mislabe	•			Power Loss/			Other
,	In	spection	Strip in	Tube		Drawing		Misread			L	,			
	Пм	larks/Ch	atter			Drill Holes	Г	Off-set							-
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	N	/ave/Tw	ist in Tub	oe		Fit/Function		Out of 9	Sequence						

June-03-13 7:21:32 AV

Work Order ID: 102557

Parent Item:

D3197-041

Parent Item Name: Bar Assembly

102557 *D3197-041*

Start Date: 6/03/13

Required Date: 6/10/13

Start Qty: 6.00

Required Qty: 6.00

D3489-3-200

Manufactured

180

Each

13.0000

Loc Code

**

12

FF 13-06-11

D3489-3-200

Purchased

No

Location Loc Otv 96109 180

50.6950

Loc Code

2.42 18.15

**

M7075T73R1 000

M7075T73R1.000

Location Loc Qty MAT012 50.695 120503 11.05 122386 6.27 125586 33.375 180 Each

2,697.000

14.625 12

MS21042L3

No

Purchased

**

FF 13-06-11

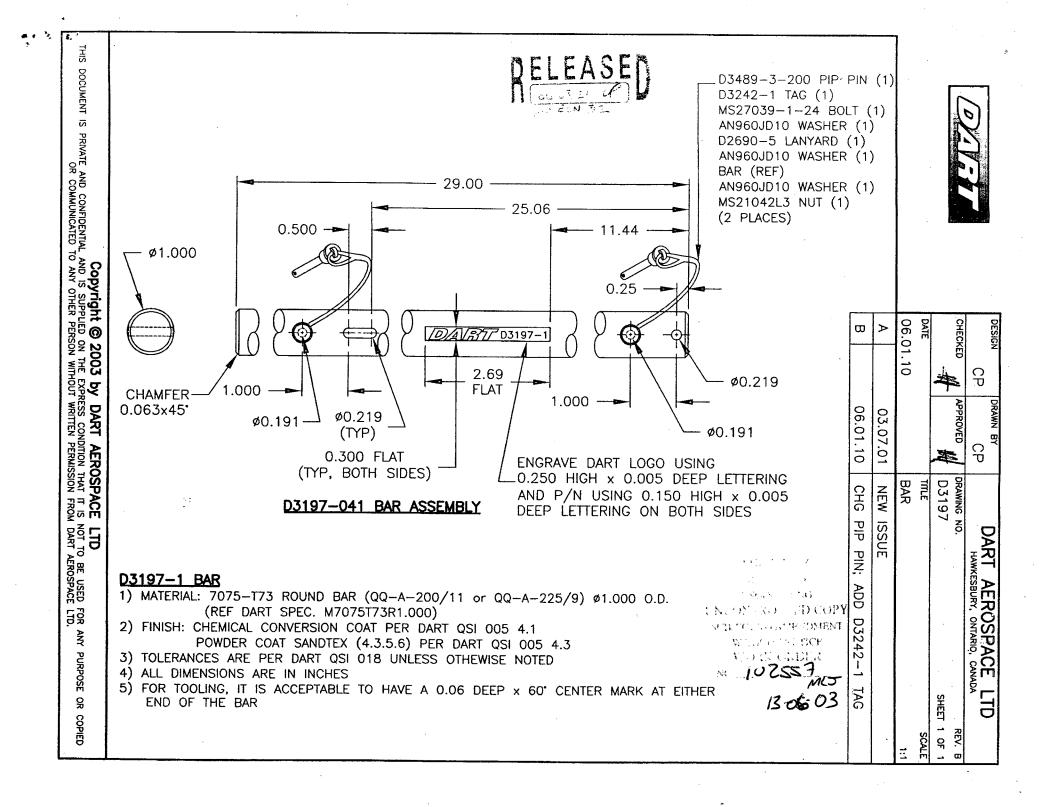
13/06/06

MS210421 3

Location Loc Qty Loc Code FP001 122141 GA 18 122452 18 ST314 268 117885 32 119017 55 119075 138 123265 ST506 2408 123900 954 124291 1454

12

DQA:		Date	:									A DAT
					WORK ORDER NON-	-CC	ONFO	RMANCE / UPDATE				AEROSPACE
QA Closed:		Date	: 						W	ork Order up	date only	
Work Orde	r:				DISPOSITION			AGAI	NST DE	PARTMENT	PROCESS	
					Rework			Skid-tube Crosst	ube]	Water Jet	Engineering
Part N	lo.				Scrap			Machining Small	Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is		Thern	noforming Finis	hing	Rec/Stor	e/Packaging	Other
NCR N	lo				Suspected Unapproved			Large Fab Compo	site]	Supplier	
Root				Desc	ription of work order update		Initial	Action		Sign &		1
Cause	Date	Step	Qty		or non-conformance	1	ief Eng	Description		Date	Verification	QC Inspector
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Offset/Setup	$\overline{\cdot}$											
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	Cracks		4	-	Broken/Damage/Defect	-	Hardwa		\vdash	Part Incorred		Temperature/Cure
		Kink/Rippl	e/Wave	-	Burrs	<u> </u>	1	ion Incomplete/Unqualified	<u> </u>	Part Lost/Mi	~ 	Weld
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DART AEROSPACE LTD	Work Order:	105223
Description: Bar	Part Number:	D3197-1
Inspection Dwg: D3197 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

х	First Article	Prototype	!
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
29.00	+/-0.030	29.000			Tupe	21-10
25.06	+/-0.030	25.000			 V	
11.44	+/-0.030	11.440				
0.500	+/-0.010	,500			Hem	RT-4
0.250	+/-0.030	.246				
Ø0.219	+0.005/-0.000	,220	/			
Ø0.191	+0.005/-0.000	,193	/			
1.000	+/-0.005	.999	/			
2.69	+/-0.030	2.688				
1.000	+/-0.010	. 998				
0.300	+/-0.010	.302				
0.063 x 45°	+/-0.010	.063				
Ø1.000	+/-0.010	.997				
	•					

- JAO				
1 (2)	Audited by:	on	Prototype Approval:	N/A
Date: 7 - 06.80%	Date:	13/1/10	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.04.20	New Issue (P/O D3197-041)	KJ/JLM 1.A	
В	07.03.09	Dwg revision update	KJ/JLM OK	B